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EXAMINER

COUGHLAN, PETER D

ART UNIT PAPER NUMBER

2129

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/089,369

Applicant(s)

SCHURMANN, ALFRED

Examiner

Peter Coughlan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/28/02</u> . | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

1. This office action is in response to an AMENDMENT entered November 15, 2005 for the patent application 10089369 filed on December 27, 2002 Date.

2. The First Office Action of October 3, 2005 is fully incorporated into this Final Office Action by reference.

Status of Claims

3. Claims 1-5, 8-12 are amended. Claims 6 and 7 have been cancelled, and claims 1-5, 8-12 are pending.

Amended Claims

35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-5, 8-12 are rejected under 35 U.S.C. 101 for nonstatutory subject matter. The computer system must set forth a practical application of that § 101 judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77. The invention is ineligible because it has not been limited to a substantial practical application. A algorithm or formula that generates values that can be transposed into 'emotions' is not useful or tangible

In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is "useful, tangible and concrete." If the claim is directed to a practical application of the § 101 judicial exception producing a result tied to the physical world that does not preempt the judicial exception, then the claim meets the statutory requirement of 35 U.S.C. § 101.

The phrase 'establishing intensities of satisfactions and desires with regard to said needs as a primary emotion intensities of Pd, where a satisfaction and desire concerns one need', is not clear in its purpose or scope. An emotion is not a tangible object and does not exist in the real world.

The invention must be for a practical application and either:

- 1) specify transforming (physical thing) or
- 2) have the FINAL RESULT (not the steps) achieve or produce a
useful (specific, substantial, AND credible),
concrete (substantially repeatable/ non-unpredictable), AND

tangible (real world/ non-abstract) result.

A claim that is so broad that it reads on both statutory and non-statutory subject matter, must be amended, and if the specification discloses a practical application but the claim is broader than the disclosure such that it does not require the practical application, then the claim must be amended.

Generating 'emotions' based on one or more input parameters are not real and have no use.

35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 4, 9, 10 and 12 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The terms 'great', 'small' and 'made damage' fail to point out and distinctly claim what the limits are.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the

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subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kowalczyk in view of Chase, and further in view of Okamura, and further in view of Shurmann2, ('FeNAs: A Fuzzy e-Negotiation Agent System, referred to as **Kowalczyk**; U. S. Patent 6389415, referred to as **Chase**; U. S. Patent 6137646, referred to as **Okamura**; 'A Simple Thinking Artificial Servant', referred to as **Shurmann2**).

Claim 1(amended).

Kowalczyk does teach (a) establishing intensities of satisfactions and desires with regard to said needs as primary emotion intensities of Pd, where a satisfaction and desire concerns one need (**Kowalczyk**, page 26:26-28): (b)establishing stimulus patterns in said objects and situation models, and activities, where a stimulus pattern concerns one need and shows the expected changes of intensities of satisfaction and desire with regard to said need, in a time period (**Kowalczyk**, page 26:10-11; Examiner's Note (EN) 'Stimulus patterns' of applicant is equivalent to 'information' of Kowalczyk.). (c) calculating stimulus intensity of an object or situation using said stimulus patterns connected with the model of said object or situation, and the current intensities of satisfactions and desires with regard to the needs connected with these

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stimulus patterns (**Kowalczyk**, page 26:28-30; EN 'Calculating stimulus' of applicant is equivalent to 'find a solution' of Kowalczyk.). (d)calculating expected intensities of satisfactions and desires of Pd, at present and in the future with respect to the needs occurring in the stimulus patterns connected with an object or a situation, when this object or situation has been recognized by Pd (**Kowalczyk**, page 26:20-22; EN "Future" of applicant is equivalent to 'warranty' of Kowalczyk.).

Kowalczyk does not teach (e)calculating the current intensities of the following emotions of Pd, contentment, joy, happiness, dissatisfaction, annoyance, anger, grief, pain, and suffering with regard to a need of Pd; positive emotions such as liking, friendship, affection and love and negative emotions such as dislike, annoyance, anger, and hate, to/for an object, situation or an activity; retaliation and revenge, and hate, on/for/to an object frustration, depression, and sadness, with regard to a person an object or a goal; fear of an object or a situation, fear of separation from a loved object or situation, fear of performing an activity not right, and fear of not achieving a goal situation; envy at a success or a property of another robot/agent; jealousy of an object because of a positive emotion of a person or other robot/agent towards this object shame, feeling guilt with regard to a living object or a robot/agent.

Chase teaches (e)calculating the current intensities of the following emotions of Pd, contentment (**Chase**, C2:55), joy(**Chase**, C7:46), happiness (**Chase**, C7:45),, dissatisfaction (**Chase**, C8:57), annoyance (**Chase**, C8:51), anger (**Chase**, C2:56), grief (**Chase**, C2:55), pain (**Chase**, C8:23), and suffering (**Chase**, C8:27) with regard to a need of Pd; positive emotions such as liking (**Chase**, C7:16), friendship (**Chase**, C7:14;

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EN 'Friendship' of applicant is equivalent to 'friendliness' of Chase.),, affection (**Chase**, C7:10) and love (**Chase**, C7:17) and negative emotions such as dislike, annoyance(**Chase**, C8:51), anger(**Chase**, C2:56), and hate (**Chase**, C8:64), to/for an object, situation or an activity; retaliation and revenge (**Chase**, C8:28; EN 'Retaliation and revenge' is equivalent to 'torment' of Chase.), and hate (**Chase**, C8:64), on/for/to an object frustration (**Chase**, C8:63) , depression (**Chase**, C8:6), and sadness(**Chase**, C8:25), with regard to a person an object or a goal; fear of an object or a situation, fear of separation from a loved object or situation, fear of performing an activity not right, and fear of not achieving a goal situation (**Chase**, C8:37; EN Depending how one sets up the agent in Kowalczyk, in combination with Chase all these combinations can be achieved.); envy(**Chase**, C8:61) at a success or a property of another robot/agent; jealousy (**Chase**, C9:7)of an object because of a positive emotion of a person or other robot/agent towards this object shame (**Chase**, C9:28), feeling guilt with regard to a living object or a robot/agent (**Chase**, C9:23).

It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify teachings of Kowalczyk by adding the categories of emotions and needs to generations of intensities as taught by Chase to calculating the current intensities of the following emotions of Pd, contentment, joy, happiness, dissatisfaction, annoyance, anger, grief, pain, and suffering with regard to a need of Pd; positive emotions such as liking, friendship, affection and love and negative emotions such as dislike, annoyance, anger, and hate, to/for an object, situation or an activity; retaliation and revenge, and hate, on/for/to an object frustration , depression, and

sadness, with regard to a person an object or a goal; fear of an object or a situation, fear of separation from a loved object or situation, fear of performing an activity not right, and fear of not achieving a goal situation; envy at a success or a property of another robot/agent; jealousy of an object because of a positive emotion of a person or other robot/agent towards this object shame, feeling guilt with regard to a living object or a robot/agent.

For the purpose of having a spectrum of emotions and needs for further use in regards to interaction with an activity, situation or objects.

Claim 2(amended).

Kowalczyk and Chase do not teach when Pd has recognized that the intensities of satisfaction and desire with regard to said need have changed updated the intensity of said emotions using the last value of the intensity of said emotions and the said changes of intensities of satisfaction and desire when Pd has recognized and object or a situation updating the intensity of said emotions using: the last value of the intensity of emotions, said in (b) stimulus pattern connected with the recognized object or situation with regard to said need and the intensity of satisfaction and desire with regard to said need; and Pd has recognized that it is achieving or cannot achieve it's goal or intermediate goal situation, updating the intensity of said emotions using: the last value of the intensity of said emotions said in (b) stimulus pattern connected with said goal or

intermediate goal situation with regard to said need, and the intensities of satisfaction and desire with regard to said need.

Okamura teaches when Pd has recognized that the intensities of satisfaction and desire with regard to said need have changed updated the intensity of said emotions using the last value of the intensity of said emotions and the said changes of intensities of satisfaction and desire when Pd has recognized and object or a situation updating the intensity of said emotions using: the last value of the intensity of emotions, said in (b) stimulus pattern connected with the recognized object or situation with regard to said need and the intensity of satisfaction and desire with regard to said need (**Okamura**, C10:57-64; EN Using the current change of a value and adding it to the previous value is a common technique of generating a new current value.); and Pd has recognized that it is achieving or cannot achieve it's goal or intermediate goal situation, updating the intensity of said emotions using: the last value of the intensity of said emotions said in (b) stimulus pattern connected with said goal or intermediate goal situation with regard to said need, and the intensities of satisfaction and desire with regard to said need (**Okamura**, C10:57-64).

It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify combined teachings of Kowalczyk and Chase by using an established algorithm for generating a current value as taught by Okamura to illustrate when Pd has recognized that the intensities of satisfaction and desire with regard to said need have changed updated the intensity of said emotions using the last value of the intensity of said emotions and the said changes of intensities of satisfaction

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and desire when Pd has recognized an object or a situation updating the intensity of said emotions using: the last value of the intensity of emotions, said in (b) stimulus pattern connected with the recognized object or situation with regard to said need and the intensity of satisfaction and desire with regard to said need; and Pd has recognized that it is achieving or cannot achieve its goal or intermediate goal situation, updating the intensity of said emotions using: the last value of the intensity of said emotions said in (b) stimulus pattern connected with said goal or intermediate goal situation with regard to said need, and the intensities of satisfaction and desire with regard to said need.

For the purpose of generating a current result in the form of a numerical value for satisfaction.

Claim 3(amended).

The combination of Kowalczyk and Chase do not teach when Pd has recognized that said object, situation or activity has caused supported or prevented an increase or decrease of a satisfaction intensity with regard to a need of Pd updating the intensities of said positive and negative emotions using the last values of those intensities and the intensities of satisfaction and desire with regard to when Pd has recognized that said object, situation or activity has realized, supported or prevented achieving a goal situation, updating the intensities of said positive and negative emotions using the last values of these intensities said in (b) stimulus patterns connected with said goal

situation and the intensities of satisfactions and desires with regards to the needs occurring in said stimulus patterns.

Okamura teaches when Pd has recognized that said object, situation or activity has caused supported or prevented an increase or decrease of a satisfaction intensity with regard to a need of Pd updating the intensities of said positive and negative emotions using the last values of those intensities and the intensities of satisfaction and desire with regard to when Pd has recognized that said object, situation or activity has realized, supported or prevented achieving a goal situation, updating the intensities of said positive and negative emotions using the last values of these intensities said in (b) stimulus patterns connected with said goal situation and the intensities of satisfactions and desires with regards to the needs occurring in said stimulus patterns (**Okamura**, C10:57-64; EN Okamura illustrates the update can move in both a positive and negative direction with ΔP .).

It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify combined teachings of Kowalczyk and Chase by having the intensity having both a positive and negative values as taught by Okamura to recognized that said object, situation or activity has caused supported or prevented an increase or decrease of a satisfaction intensity with regard to a need of Pd updating the intensities of said positive and negative emotions using the last values of those intensities and the intensities of satisfaction and desire with regard to when Pd has recognized that said object, situation or activity has realized, supported or prevented achieving a goal situation, updating the intensities of said positive and negative

emotions using the last values of these intensities said in (b) stimulus patterns connected with said goal situation and the intensities of satisfactions and desires with regards to the needs occurring in said stimulus patterns.

For the purpose of having increased flexibility with the resulting intensity values.

Claim 4(amended).

Kowalczyk, Chase and Okamura do not teach establishing the need of Pd for retaliation and revenge on said object, and the intensity of satisfaction and desire with regard to said need for retaliation and revenge on said object and intensities of satisfaction and desire with regard to said need for retaliation and revenge, when the intensity of said in (e) negative emotions of Pd to this object is great; Updating the intensities of satisfaction and desire with regard to said need for retaliation and revenge using the last and current intensities of the negative emotions to said object and; Updating the said intensity of hate for/to said object using the current intensity of negative emotions to/for this object and current intensity of desire with regard to said need for retaliation and revenge on this object when said intensity of negative emotions to said object has been updated.

Shurmann2 teaches establishing the need (**Schurmann2**, page 1:19-22; EN 'Need' of applicant is equivalent to 'motivations' of Schurmann2.) of Pd for retaliation and revenge (**Chase**, C8:28; EN 'Retaliation and revenge' is equivalent to 'torment' of Chase.) on said object, and the intensity of satisfaction (**Kowalczyk**, page26:26-28) and desire with regard to said need for retaliation and revenge on said object and intensities

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of satisfaction and desire with regard to said need for retaliation and revenge, when the intensity of said in (e) negative emotions of Pd to this object is great (EN 'Need' and 'desire' are synonyms.); Updating the intensities of satisfaction and desire with regard to said need for retaliation and revenge using the last and current intensities of the negative emotions to said object and (**Okamura**, C10:57-64); Updating the said intensity of hate for/to said object using the current intensity of negative emotions to/for this object and current intensity of desire with regard to said need for retaliation and revenge on this object when said intensity of negative emotions to said object has been updated (**Okamura**, C10:57-64).

It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify combined teachings of Kowalczyk, Chase and Okamura by illustrating one possible relationship between need and desire as taught by Schurmann² to establish the need of Pd for retaliation and revenge on said object, and the intensity of satisfaction and desire with regard to said need for retaliation and revenge on said object and intensities of satisfaction and desire with regard to said need for retaliation and revenge, when the intensity of said in (e) negative emotions of Pd to this object is great; Updating the intensities of satisfaction and desire with regard to said need for retaliation and revenge using the last and current intensities of the negative emotions to said object and; Updating the said intensity of hate for/to said object using the current intensity of negative emotions to/for this object and current intensity of desire with regard to said need for retaliation and revenge on this object when said intensity of negative emotions to said object has been updated.

For the purpose of evaluating a need of an action based on negative emotions.

Claim 5(amended).

The combination of Kowalczyk, Chase, Okamura and Shurmann2 teach updating said intensities of frustration and depression using the current said in (e) intensity of emotions contentment, joy, happiness, dissatisfaction, annoyance, anger, grief, pain and suffering with regards to all needs of Pd; And updating said intensity of sadness using said in (c) intensity of stimulus of said person, object or goal situation and the current intensity of emotions contentment, joy, happiness, dissatisfaction, annoyance, anger, grief, pain and suffering with regard to all the needs of Pd (**Okamura**, C10:57-64 and **Schurmann2**, page 1:19-22 and **Chase**, C2, 7, 8, 9 and **Kowalczyk**, page 26-28; EN Updating of covered with Okamura, needs and desires is cover by Schurmann2, different categories of desires and needs is covered by Chase and Kowalczyk covers intensity.).

Claim 8(amended).

The combination of Kowalczyk, Chase and Shurmann2 teach calculating the intensity (**Kowalczyk**, page 26-28)of said in (e) emotion fear (**Chase**, C8:37) of the robot/agent Pd of Claim 1, of an object or a situation of separation from a loved object or situation of performing an activity not right or not achieving a goal situation using said (c) stimulus intensity of said object, situation, activity or goal situation, respectively, when Pd has recognized that: it cannot avoid said object or situation with negative

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stimulus intensity, it may be compelled to separate from said object or situation with positive stimulus intensity or it may not achieve the wished goal situation when performing an activity (**Schurmann2**, page 1:19-22; EN This would fall under motivation.).

Claim 9(amended).

The combination of Kowalczyk, Chase and Shurmann2 teach establishing (i) the following envy (**Chase**, C8:61) need (**Schurmann2**, page 1:19-22) of Pd the other robot/agent (**Kowalczyk**, page26:10-11; EN 'Other robot/agent' of applicant is equivalent to 'other parties' of Kowalczyk.) should have relative small satisfaction intensity with respect to the need associated with said success or property and (ii) the intensities of satisfaction and desire with regard to said envy need when the robot/agent Pd has recognized that the satisfaction intensity of the other robot/agent with regard to said need associated with said success or property is great and its own desire intensity with respect to the need associated with said success or property is great; and calculating the current said intensities of satisfaction and desire with regard to said envy need using the current intensity of satisfaction of Pd with regard the need associated with said success or property, and the current intensity of satisfaction of said other robot/agent with regard to the need associated with said success or property as recognized by the robot/agent Pd (**Kowalczyk**, page 26:26-28; EN All these parameters fall within Kowalczyk's 'constraints, preferences and priorities'.).

Claim 10(amended).

The combination of Kowalczyk, Chase and Shurmann2 teach establishing (i) the following jealousy (**Chase**, C9:7) need (**Schurmann2**, page 1:19-22) the intensity of the positive emotion of this person or the other robot/agent towards this object should be small, and (ii) the intensities of satisfaction and desire (**Kowalczyk**, page 26:26-28)with regard to said jealousy need when the robot/agent Pd has recognized that the intensity of positive emotion of the person or the other robot/agent towards said object is too great and the intensity of positive emotion of the robot/agent Pd towards the person or the other robot/agent is not small; and calculating the current said intensities of satisfaction and desire with regard to said jealousy need using the current intensity of positive emotion of the robot/agent Pd towards the person or the other robot/agent; and the current intensity of the positive emotion of the person or the other robot/agent towards said object as recognized by Pd (**Kowalczyk**, page 26:26-28).

Claim 11(amended).

The combination of Kowalczyk, Chase and Okamura teach Calculating the current intensity of said (e) emotion shame (**Chase**, C9:28) of the robot/agent Pd of using the last value of the intensity of shame and the last and current value of said in (e) intensity of the emotions dissatisfaction(**Chase**, C8:57), annoyance (**Chase**, C8:51), anger (**Chase**, C2:56), grief (**Chase**, C2:55), pain (**Chase**, C8:23) and suffering (**Chase**, C8:27) with respect to the need for recognition, acknowledgement and self-esteem when Pd has recognized that it violated some norms or rules (**Okamura**, C10:57-64 and

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Kowalczyk, page 26:26-28; EN Okamura covers using the last value to calculate the new current value and Kowalczyk covers generating the value of intensity.).

Claim 12(amended).

The combination of Kowalczyk and Chase teach Calculating the current intensity (**Kowalczyk**, page 26:26-28) of said in (e) emotion feeling guilt (**Chase**, C9:23) of the robot/agent Pd of with respect to a living object or a robot/agent using the last and the current values of said in (e) intensity of the emotions dissatisfaction (**Chase**, C8:57), annoyance (**Chase**, C8:51), anger (**Chase**, C2:56), grief(**Chase**, C2:55) , pain (**Chase**, C8:23) and suffering(**Chase**, C8:27) with respect to need for recognition acknowledgement and self-esteem; the intensities of said in (e) positive and negative emotions of the robot/agent Pd towards said living object or robot/agent (**Kowalczyk**, page 26:26-28); and the decrease of these satisfaction intensities of said living objects or robot/agent which the robot/agent Pd has caused when the robot/agent has recognized that it made damage to said living object or robot/agent (**Kowalczyk**, page 26:26-28).

Response to Arguments

7. In reference to the Applicant's argument:

By a stimulus Lee understand attributes associated with an object, agent or event, where an attribute is the intensity or degree of emotions: joy, despair, love, hate,

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fear, importance of goals, success and failure of goals etc. Lee does not consider stimulus patterns and does not determine intensity of stimulus of an object by stimulus patterns. Lee measures the importance of an object or event in a quite different way than I do in claim 1, where a stimulus pattern concerns one need; in the amended claim 1 this difference is pointed out.

Also, the amended claim 1 and 3 show, that the intensities of positive and negative emotions are calculated in a quite different way than in the paper of Lee.

Examiner's response:

'Stimulus patterns' of applicant are equivalent to 'factors' of Lee. For example, the 'stimulus pattern' of *achieve* (**Schurmann**, description, page 2:6) is equivalent to the 'factor' of *success* (**Lee**, p157, C1:27). Another example is the 'stimulus pattern' of *belonging* (**Schurmann**, description, page2:7) is equivalent to the 'factor' of '*desirability*' (**Lee**, p157, C1:33). 'Stimulus patterns' and 'factors' are the lower building blocks for the type of emotion. 'Intensity of emotion' of applicant is similar to 'motivation' of Schurmann. If a person is hungry, then they would eat. This raised the question is there really a difference between level of emotion and motivation? First Office Action applies.

8. In reference to the Applicant's argument:

Response to objections to claim 2.

In my cited paper (February 1998) I do not consider the emotions contentment, joy, *dissatisfaction*, *anger*, grief; the symbols SM1 and SM2, in section „2.5 Attraction and Motivation“, denote situations and SMI should not be interpreted as a person/agent, and SM2 is neither a need nor a desire. I do not see how from attributes of objects, agents and events considered by Lee could be calculated the intensity of said emotions with regard to a need. The amended claim 2 shows that the calculation of said intensity is new and not obvious to an expert.

I do not teach the intensities of said emotions change in my said paper (1998), neither in section 2.5 nor in other section; said section 2.5 is only an attempt to establish a motivation of an agent to execute a sub-activity.

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Further, the Examination Report states that it would have been obvious to modify the representation of stimulus *patterns in* the description of objects and situations of Lee, with the stimulus patterns associated with a goal situation in my invention. As I said in §1, Lee does not teach stimulus pattern with respect to a need. Lee teaches only attributes such as joy, despair, love, hate, fear, importance of goals, likelihood of goal success and failure, success and failure of goals. Most of these attributes are constant at time and therefore such stimulus do not judge intelligently the current importance of said object, situation or goal for the agent.

Further, the Examination Report say that Lee teaches representation of intensity of contentment, joy, dissatisfaction and anger when realizing achieving a goal - but Lee does not consider the intensity of these emotions with regard to a need of a robot/agent, as I do in my invention.

Examiner's response:

In the specification Pb is 'denotes a human, a mammal, a virtual human or mammal in a software system', b is 'need' and t is 'time'. In Schurmann, SM1 is the 'being', SM2 is the situation and t is time. Therefore 'human, mammal, virtual human, or mammal in a software system' is equivalent to a 'being'. 'Need' is similar to 'situation', and 'time' equals 'time'. Applicant claims both functions are different but both input parameters are the same. Applicant's 'stimulus patterns' are equivalent to Lee's 'factors' Since 'factors' are the basic unit of Lee, they can be used in respect to 'need' from Schurmann. Lee does teach intensity, (Lee, p157, C2: section 4.3, calculation of Emotion Intensity.). First Office Action applies.

9. In reference to the Applicant's argument:

Response to objections to claim 8

EI-Nasr understand stimulus as attributes such as: likelihood of the event or goal, desirability of the event with regard to a goal, blocked state, unblocked state. In §4, C 1,

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22-25, El-Nasr states that fear of a robot is caused by four external states: sound, brightness, anxiety and being alone. Thus, fear, according to El-Nasr, is not determined by stimulus patterns with regard to a need. The method of El-Nasr for establishing fear in a robot is naive and cannot be modified to get the method in my invention. The method in my invention is useful to measure the un-ability of the robot/agent to cope with a situation or to achieve a goal when executing an activity. The method of El-Nasr for establishing fear in a robot is a primitive simulation of a fear behavior of a child (p. 138, §3.3, C2,4-9) and is useless for a real robot/agent.

Examiner's response:

Applicant's argument of a simulation of fear based on that of a child is not applicable to the invention. This is a matter of perception and supposed sophistication of invention. Both models have the same three parameters of time, being (child) and situation (sound, level of darkness). First Office Action applies.

10. In reference to the Applicant's argument:

Response to objections to claim 11.

The last two lines on p. 8 of the Examination Report are not clear (it seems to be a misunderstanding) because (i) Lee does not teach the format for the equation of shame, (ii) section Attraction and Motivation does not occur in Lee but in Schurmann (1998), and (iii) in Schurmann (1998) is nothing said about the emotions considered in claim 11.

Further, the Examiner says that Joao teaches the method for representing the intensity of shame. Actually, Joao does not teach the representation of shame by intensities of the emotions dissatisfaction, annoyance, anger, grief, pain and suffering. The intensity of the emotion shame in Joao is not calculated, it is only one of many input data given in questionnaires concerning the personality of a real person. These questionnaire data are analysed by computer programs to get psychological/psychiatric personality and diagnostic reports (and other reports too) concerning the said person.

Further, in the Report is said that it would have been obvious to modify the representation of stimulus patterns of Lee to get the intensity of shame of claim 11. As I said, Lee does not use stimulus patterns and I do not see how by means of a stimuli or

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emotion attributes of Lee could be determined the intensity of shame, which is an emotion with respect to the need for recognition, acknowledgement and self-esteem.

Examiner's response:

Applicant is correct in that there was a misunderstanding about the reference. The reference should have been, (Joao, C16:21). Joao shows the existence of the emotion 'shame'. The combination of the existence of 'shame' with the format of motivation/intensity function satisfies the requirements of Claim 11. First Office Action applies.

Examination Considerations

11 The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, I 45-48; p 2100-9, c 1, I 1-4). The Examiner has the full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

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12 Examiner's Notes are provided to assist the applicant to better understand the nature of the prior art, application of such prior art and, as appropriate, to further indicate other prior art that maybe applied in other office actions. Such comments are entirely consistent with the intent and sprit of compact prosecution. However, and unless otherwise stated, the Examiner's Notes are not prior art but link to prior art that one of ordinary skill in the art would find inherently appropriate.

13. Examiner's Opinion: Paragraphs 11 and 12 apply. The Examiner has full latitude to interpret each claim in the broadest reasonable sense.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Claims 1-5, 8-12 are rejected.

Correspondence Information

16. Any inquiry concerning this information or related to the subject disclosure should be directed to the Examiner Peter Coughlan, whose telephone number is (571) 272-5990. The Examiner can be reached on Monday through Friday from 7:15 a.m. to 3:45 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor David Vincent can be reached at (571) 272-3687. Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,

Washington, D. C. 20231;

Hand delivered to:

Receptionist,

Customer Service Window,

Randolph Building,

401 Dulany Street,

Alexandria, Virginia 22313,

(located on the first floor of the south side of the Randolph Building);

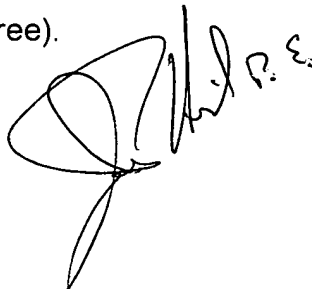
or faxed to:

(571) 273-8300 (for formal communications intended for entry.)

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).



Peter Coughlan



4/12/2006